1	2	3	4
3.	Arunachal Pradesh	366	94
4.	Assam	9524	2896
5.	Bihar	36707	10078
6.	Chandigarh	391	112
7.	Dadra & Nagar Haveli	60	14
8.	Delhi	11973	2316
9.	Goa	508	150
10.	Daman	26	12
11.	Diu	17	
12.	Gujarat	17557	4878
13.	Haryana	6996	1924
14.	Himachal Pradesh	2197	608
15.	Jammu & Kashmir	3567	868
16.	Karnataka	19117	5350
17.	Kerala	12368	3600
18.	Lakshadweep	81	22
19.	Madhya Pradesh	28127	7536
20.	Maharashtra	33550	9014
21.	Manipur	782	208
22.	Meghalaya	752	200
23.	Mizoram	293	78
24.	Nagaland	542	128
25.	Orissa	13456	3730
26.	Pondicherry	360	64
27.	Karikal	86	18
28.	Mahe	18	4
29.	Yanam	8	2
30.	Punjab	8619	2392
31.	Rajasthan	18704	5092
32.	Sikkim	174	50
33.	Tamil Nadu	23741	6790
34.	Tripura	1173	302
35.	Uttar Pradesh	59122	15936
36.	West Bengal	28934	7796
	Total	368445	99950

Research Institutions

995. SHRI BHAGWAN SHANKAR RAWAT : Will the Minister of AGRICULTURE be pleased to state:

(a) the names of research councils, research centres and projects under the Indian Council of Agricultural Research in the country, location-wise;

(b) the details of the expenditure incurred on them during the last three years, council-wise and project-wise; and

(c) the details of the achievements of these research centres during the said period and the impact of these research works on the agricultural production in the States?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (DR. S. VENUGOPALACHARI) : (a) Sir, the details are given in Statement I.

(b) The details are given in Statement II.

(c) The details are given in Statement III.

Statement I

Name of State	Name of the Institute/PD/NRC/AICRP	Location
1	2	3
A&N Islands	Central Agriculture Research Institute	Port Blair
Andhra Pradesh	Central Research Institute for Dryland Agriculture	Hyderabad
	National Academy for Agricultural Research Management	Hyderabad
	Central Tobacco Research Institute	Rajahmundry
	N.R.C—Sorghum	Hyderabad
	Project Directorate—Rice	Hyderabad
	P.D.—Poultry	Hyderabad
	Project Directorate—Oilseed	Hyderabad
	AICRP—Agro-meteorology	Hyderabad
	AICRP—Tobacco	Rajahmundry
	AICRP—Dryland Agriculture	Hyderabad
	AICRP—Soil Test Crop Response	Hyderabad
	AICRP—Sorghum	Hyderabad
	Network—Agricultural Ornithology	Hyderabad
Arunachal Pradesh	N.R.C.—Yak	Dirang
Bihar	Indian Lac Research Institute	Ranchi
	P.D.– Water Management*	Patna
Delhi	National Centre for Agricultural Economics & Policy Res.	New Delhi
	Indian Agricultural Research Institute	New Delhi
	Indian Agricultural Statistics Research Institute	New Delhi
	National Bureau of Plant Genetic Resources	New Delhi
	N.R.C—Biotechnology (Crop Science)	New Delhi
	NRC—DNA Fingerprinting	New Delhi
	NRC—Pest Management	New Delhi
	P.D.—Maize	New Delhi
	AICRP—Arid Legumes	New Delhi
	AICRP—Tilage Management	New Delhi
	AICRP—Nematode	New Delhi
	AICRP—Medicinal and Aromatic Plants	New Delhi

1	2	3
	AICRP—Biological Nitrogen Fixation	New Delhi
	AICRP—PHT on Horticultural Crops	New Delhi
	Project on PHT cn Fruits & Vegetables	New Delhi
	AICRP—Home Science	New Delhi
	AICRP—Optimisation of Groundwater Wells & Pumps	New Delhi
	AICRP—Pesticide Residue	New Delhi
	AICRP—Under-utilised Plants	New Delhi
	AICRP—Long-term Fertilizer Experiment	New Delhi
	AICRP—Agricultural Drainage	New Delhi
	AICRP—Floriculture	New Delhi
	Long Term Project under Indo-USSR, Publication & Information Division	New Delhi
	INDO-UK & INDO-USA Prog	
	Bilateral Cooperation Programme with Developed Countries	
	National Agril. Science Centre & Museum	New Delhi
	ICAR Agricultural Library	New Delhi
	Strengthening of Monitoring & Mechanisms & Training	
	Utilization of Internal Competence	New Delhi
	Integrated Krishi Vigyan Kendras	Instt./SAUs/NGOs
	National Agricultural Resource Project-II	New Delhi
	Agricultural Human Resource Development	New Delhi
	Develop. & Strengthening of Agril. Edn. of Central Univ.	New Delhi
	Develop. & Strengthening of SAUs	New Delhi
	Network Embryo Transfer Technology**	New Delhi
	Establish. of Centres of Advanced Studies in SAUs & DUs	New Delhi
	Network Micronutrients**	New Delhi
Goa	ICAR Res. Complex for Goa	Goa
Gujarat	N.R.C.—Medicinal & Aromatic Plants	Anand
	N.R.C.—Grounnut	Junagadh
	AICRP—Groundnut	Junagadh

1	2	3
Himachal Pradesh	Central Potato Research Institute	Shimla
	N.R.C.—Mushroom	Solan
	AICRP—Mushroom	Solan
	AICRP—Apple Scab	Solan
	AICRP—Potato	Shimla
	AICRP—Micro Biological Decomposition	Palampur
Haryana	Central Institute for Research on Buffalo	Hisar
	Central Soil Salinity Research Institute	Karnal
	National Dairy Research Institute	Karnal
	National Bureau of Animal Genetics Resources & NIAG	Karnal
	NRC—Biotechnology (Part of NDRI)	Karnal
	N.R.C.—Equine	Hisar
	Directorate of Wheat Research	Karnal
	AICRP—Barley	Karnal
	AICRP—Arid Fruits	Hisar
	AICRP—Agricultural Byproducts	Karnal
	AICRP—Rapseed & Mustard	Hisar
	AICRP—Honey Bee	Hisar
	AICRP—Management of Salt Affected Soils	Karnal
	AICRP—Buffalo	Hisar
	AICRP—Blood Protesta	Hisar
	Network Animal Genetic Resources	Karnal
Jammu & Kashmir	Central Institute of Temperate Horticulture	Srinagar
Karnataka	Indian Institute of Horticultural Research	Bangalore
	National Institute of Animal Nutrition & Physiology	Bangalore
	N.R.C.—Cashew	Puttur
	P.D.—Biological Control	Bangalore
	AICRP—Betelvine	Bangalore
	AICRP—Tropical Fruits	Bangalore
	AICRP—Disease Monitoring & Surveillance	Bangalore
	AICRP—Small Millets	Bangalore
	AICRP—Agriculture Acrology	Bangalore
	AICRP—Cashew	Vittal

1	2	3
Kerala	Central Institute of Fisheries Technology	Cochin
	Central Marine Fisheries Research Institute	Cochin
	Central Tuber Crops Research Institute	Trivandrum
	Indian Instt. of Spices Res.	Calicut
	Central Plantation Crops Research Institute	Kasargod
	AICRP—Palms	Kasargod
	AICRP—Spices	Calicut
Madhya Pradesh	Central Institute of Agricultural Engineering	Bhopal
	Indian Institute of Soil Science	Bhopal
	N.R.C.—Weed Science	Jabalpur
	N.R.C.—Soybean	Indore
	AICRP—Micro Nutrients	Bhopal
	AICRP—Animal Energy	Bhopal
	AICRP—Farm Implements & Machinery	Bhopal
	AICRP—Power Tiller	Bhopal
	AICRP—Soybean	Indore
	AICRP—Renewable Energy	Bhopal
	AICRP—Human Engg. & Safety Studies	Bhopal
Maharashtra	Central Institute of Cotton Research	Nagpur
	Central Institute for Research on Cotton Technology	Bombay
	Central Institute of Fisheries Education	Bombay
	National Bureau of Soil Survey & Land Use Planning	Nagpur
	N.R.C.—Citrus	Nagpur
	N.R.C.—Onion and Garlic	Godra(Nasik)
	N.R.C.—Grapes	Pune
	AICRP—Pearl Millets	Pune
Manipur	Establishment of Central Agril. Univ. for NEH Region	Imphal
Meghalaya	ICAR Research Complex for NEH Region	Shillong
Nagaland	N.R.C.—Mithun	Nagaland

1	2	3
Orissa	Central Rice Research Institute	Cuttack
	Central Institute for Freshwater Aquaculture	Bhubaneshwar
	NRC for Women in Agriculture	Bhubaneshwar
	AICRP—Tuber Crops	Bhubaneshwar
	AICRP—Weed Control	Cuttack
	ORP in Aquaculture	Bhubaneshwar
	Water Technology Centre of Eastern Centre	Bhubaneshwar
Punjab	Central Institute for Post Harvest Engg. & Technology	Ludhiana
	AICRP—Energy Requirement	Ludhiana
	AICRP—Application of Plastic in Agriculture	Ludhiana
	AICRP—Jaggery & Khandsari	Ludhiana
	AICRP—Harvest & Post Harvest	Ludhiana
Rajasthan	Central Sheep and Wool Research Institute	Avikanagar
	Central Arid Zone Research Institute	Jodhpur
	N.R.C—Arid Horticulture	Bikaner
	N.R.C.—Rapeseed & Mustard	Bharatpur
	N.R.C.—Camel	Jobner
	AICRP—White Grub	Durgapur
	AICRP—Rodent Control	Jodhpur
	AICRP—Sheep	Bikaner
Sikkim	N.R.C.—Orchids	Tadong
Tamil Nadu	Sugarcane Breeding Institute	Coimbatore
	Central Institute of Brackishwater Aquaculture	Madras
	N.R.C.—Banana	Trichy
	AICRP—Cotton	Coimbatore
Uttar Pradesh	Central Soil & Water Con. Research & Training Instt.	Dehradun
	Indian Grassland & Fodder Research Institute	Jhansi
	Vivekanand Parvatiya Krishi Anusandhan Shala	Almora
	India Institute of Sugarcane Research	Lucknow
	Indian Veterinary Research Institute	Izatnagar

1	2	3
	Central Institute of Subtropical Horticulture	Lucknow
	National Bureau of Fish Genetic Resources	Lucknow
	Central Institute of Research on Goat	Makhdoom
	Central Avian Research Institute	Izatnagar
	Indian Institute of Pulses Research***	Kanpur
	N.R.C.—Meat & Meat Products	Izatnagar
	N.R.C.—Agro-forestry	Jhansi
	N.R.C.—Cold Water Fisheries	Haldwani
	P.D —Cattle	Meerut
	P.D.—Vegetable****	Varanasi
	P.D.—Cropping System Research	Modipuram
	AICRP—Pulses (Mullarp)	Kanpur
	AICRP—Pigeon Pea	Kanpur
	AICRP—Goat	Farrah
	AICRP—Foot and Mouth Disease	Izatnagar
	AICRP—Sub-tropical Fruits	Lucknow
	AICRP—Sugarcane	Lucknow
	AICRP—Forage Crops	Jhansi
	AICRP—Pig	Izatnagar
	AICRP—Diaraland Improvement	Modipuram
	AICRP—Agro-forestry	Jhansi
	AICRP—Chick Pea	Kanpur
	Network Crop Based Animal Production System	Jhansi
	Network scheme—Sugarbeet	Lucknow
	Vegetable Seed Project	Varanasi
West Bengal	Jute Technological Research Laboratory	Calcutta
	Central Inland Capture Fisheries Research Institute	Barrackpore
	Central Research Institute for Jute & Allied Fibres	Barrackpore
	AICRP—Jute	Barrackpore

PD—Project Directorate; AICRP—All India Coordinated Research Project

NRC—National Research Centre

Statement II

Indian Council of Agricultural Research

Details of Institute/Project-wise Expenditure Incurred during the last Three Years

Name of the Institute/Project	Expenditure Incurred in the Last Three Years		
	1994-95 Actual Expenditure	1995-96 Actual Expenditure	1996-97 Actual Expenditure
1	2	3	4
I. CROP SCIENCE			
A. Plant Genetic Resources			
1. National Bureau of Plant Genetic Resources	144.99	144.59	140.00
2. AICRP—Under-utilised & Under-exploited Plants	21.81	34.52	25.00
3. AICRP—Arid Legumes	2.87	22.36	20.00
Total (A)	169.67	201.47	185.00
B. Food Crops			
1. Indian Agricultural Research Institute	996.40	808.01	760.00
2. Central Rice Research Institute	137.60	159.98	135.00
3. Vivekananda Parvataiya Krishi Anusandhan Shala	67.00	91.75	90.00
4. Indian Institute of Pulses Research	424.49	159.40	125.00
5. AICRP—Chick Pea	0.00	98.05	85.00
6. AICRP—Pegion Pea	2.12	78.40	85.00
7. AICRP—Pulses(MULLARP)	0.00	110.28	115.00
8. Directorate of Wheat Research	439.99	413.48	250.00
9. N.R.C—Sorghum	221.71	72.26	55.00

1	2	3	4
10. AICRP—Sorghum	1.18	97.98	90.00
11. Project Directorate—Rice	378.50	447.04	415.00
12. P.D.—Maize	152.42	230.32	290.00
13. AICRP—Pearl Millets	68.82	70.25	85.00
14. AICRP—Small Millets	72.67	67.89	80.00
15. AICRP—Barley	54.93	32.24	20.00
Total (B)	3017.83	2937.33	2680.00
C. Forage Crops			
1. Indian Grassland & Fodder Research Institute	160.00	134.00	75.00
2. AICRP—Forage Crops	113.00	96.10	92.00
Total (C)	273.00	230.10	167.00
D. Commercial Crops			
1. Central Tobacco Research Institute	112.45	112.07	65.00
2 Indian Institute of Sugarcane Research	135.39	116.63	60.00
3. Central Institute of Cotton Research	185.33	132.21	100.00
4. Central Research Institute for Jute & Allied Fibres	93.99	55.24	80.00
5. Sugarcane Breeding Institute	115.00	130.41	70.00
6. AICRP—Cotton	116.66	160.31	160.00
7. AICRP—Jute	43.03	53.32	40.00
8. AICRP—Tobacco	43.71	49.62	53.00
9. AICRP—Sugarcane	53.03	70.35	60.00
10. Network scheme—Sugarbeet	5.06	4.38	8.00
Total (D)	903.65	884.54	696.00

1	2	3	4
E. Oilseeds			
1. N.R.C.—Groundnut	109.85	79.99	110.00
2. N.R.C.—Soybean	91.81	91.79	100.00
3. N.R.C.—Rapeseed & Mustard	94.85	60.83	80.00
4. Project Directorate—Oilseed	359.99	284.07	300.00
5 AICRP—Groundnut	13.19	20.84	52.00
6. AICRP—Rapseed & Mustard	0.00	55.65	50.00
7. AICRP—Soybean	64.76	52.19	48.00
Total (E)	734.45	645.36	740.00
F. Plant Protection			
1. N.R.C.—Integrated Pest Management	33.92	74.07	65.00
2. P.D—Biological Control	87.01	115.31	120.00
3. AICRP—Honey Bees	21.13	31.86	30.00
4. AICRP—White Grub	23.86	28.46	26.00
5. AICRP—Agriculture Acarology	32.59	21.92	20.00
6. AICRP—Rodent Control	28.18	32.41	35.00
7. AICRP—Pesticide Residue	89.61	82.05	70.00
8. AICRP—Nematode	50.42	55.54	50.00
9. Network—Economic Ornithology	18.43	20.71	22.00
Total (F)	385.15	462.33	438.00
G. Hybrid Seed			
1. Project on Promotion of Research & Development on Hybrid Seed in Selected Crops	118.49	178.32	200.00

1	2	3	4
H. Genetic Engineering & Biotechnology for Crop Improvement			
1. N.R.C.—Biotechnology Centre for Crop Science	60.06	106.31	110.00
2. Genetic Engg. & Biotechnology			Not approved
3. N.R.C.—DNA Fingerprinting		75.00	130.00
I. Seed Technology Research & Breeder Seed Production			
1. National Seed Project including existing AICRP on Seed Borne Diseases	561.33	332.70	268.00
Total (C.S.)	6223.63	6053.46	5614.00
II. HORTICULTURE			
A. Fruits			
1. Indian Institute of Horticultural Research (50%)	404.94	314.96	330.00
2. Central Institute of subtropical Horticulture	205.00	195.00	140.00
3. ICAR Research Complex for Goa (10%)	Integrated with Plantation Crops		
4. N.R.C.—Citrus (90%)	88.00	79.65	70.00
5. N.R.C.—Grapes	0.14	0.17	20.00
6. AICRP—Tropical Fruits	91.95	65.49	80.00
7. AICRP—Sub-tropical Fruits	32.25	57.08	52.00
8. AICRP—Arid Fruits	61.98	48.10	49.00
9. Central Institute of Temperate Horticulture	8.00	12.64	50.00
10. N.R.C.—Arid Horticulture	44.74	95.19	100.00
11. N.R.C.—Banana	38.98	61.91	80.00
12. AICRP—Apple Scab	9.61	14.32	15.50
Total (A)	985.59	944.51	986.50

1	2	3	4
B. Vegetables			
1. Indian Institute of Horticulture Research (30%)		Integrated with Fruits	
2. N.R.C.—Mushroom	67.94	47.13	50.00
3. P.D.—Vegetable	132.75	167.82	400.00
4. Vegetable Seed Project	10.07	19.93	65.00
5. AICRP—Mushroom	13.61	14.27	20.00
6. N.R.C.—Onion and Garlic	5.50	13.00	15.00
Total (B)	229.87	262.15	550.00
C. Potato & Tuber Crops			
1. Central Potato Research Institute	326.52	209.00	167.00
2. Central Tuber Crops Research Institute	80.00	100.30	100.00
3. AICRP—Potato	47.58	55.49	53.00
4. AICRP—Tuber Crops	34.01	23.62	32.00
Total (C)	488.11	388.41	352.00
D. Plantation Crops			
1. Central Plantation Crops Research Institute	180.41	168.98	120.00
2. ICAR Research Complex for Goa (90%)	55.37	49.77	60.00
3. N.R.C.—Cashew	84.84	64.95	63.00
4. N.R.C.—Oilseed Palm	6.28	83.81	95.00
5. AICRP—Palms	55.27	51.66	52.00
6. AICRP—Cashew	32.08	22.17	25.00
Total (D)	414.25	441.34	415.00

1		2	3	4
E.	*Spices*			
1.	Indian Instt. of Species Res.	160.00	108.79	90.00
2.	AICRP—Spices	41.65	57.05	51.00
	Total (E)	201.65	165.84	141.00
F.	*Floriculture, Medicinal & Aromatic Plants*			
1.	Indian Institute of Horticulture Research (10%)		Integrated with Fruits	
2.	N.R.C.—Orchids	0.18	13.97	20.00
3.	N.R.C.—Medicinal & Aromatic Plants	0.00	8.66	30.00
4.	AICRP—Floriculture	28.16	44.50	40.00
5.	AICRP—Medicinal and Aromatic Plants	77.38	68.52	60.00
6.	AICRP—Betelvine	29.58	37.70	36.00
	Total (F)	135.30	173.35	186.00
G.	*Post Harvest Technology of Horticultural Crops*			
1	Indian Institute of Horticulture Research (10%)		Integrated with Fruits	
2.	Central Institute of Horticulture for Northern Plains (10%)		Integrated with Fruits	
3.	NRC on Citrus (10%)		Integrated with Fruits	
4.	AICRP—Post Harvest Technology of Horticultural Crops	35.30	44.63	29.00
5.	Project on PHT of Fruits and Vegetables	7.19	13.78	15.50 25.00
	Total (G)	42.49	58.41	69.50
	Total (Hort.)	2497.26	2434.01	2700.00

1	2	3	4
III. SOILS, AGRONOMY & AGROFORESTRY			
A. Resource Inventory			
1. National Bureau of Soil Survey & Land Use Planning	230.00	304.21	130.00
B. Cropping System Research			
1. Central Agriculture Research Institute	244.50	239.78	85.00
2. ICAR Research Complex for NEH Region	353.79	208.31	210.00
3. N.R.C.—Agro-forestry	48.67	66.10	67.00
4. N.R.C.—Weed Science	119.90	108.06	90.00
5. P.D.—Cropping System Research	511.38	78.58	435.00
6. AICRP—Agro-Meteorology	32.89	47.64	80.00
7. AICRP—Diaraland improvement	9.27	312.22	20.00
8. AICRP—Agro-forestry	87.11	107.13	105.00
9. AICRP—Weed Control	66.71	0.00	60.00
Total (B)	1474.22	1167.82	1152.00
C. Soil Management			
1. Central Arid Zone Research Institute	126.98	149.90	120.00
2. Central Soil & Water Conservation Research & Training Institute	219.82	229.98	120.00
3. AICRP—Tillage Management of Indian Soils	32.38	193.89	42.00
4. AICRP—Management of Acid Soil	0.00		
Total (C)	379.18	573.77	282.00

1	2	3	4
D. Water Management			
1. Central Soil Salinity Research Institute	114.16	83.97	80.00
2. Water Technology Centre for Eastern Region	132.99	118.80	167.00
3. P.D.—Water Management	212.77	25.09	295.00
4. AICRP—Management of Salt Affected Soils	51.60	58.98	56.00
5. AICRP—Optimisation of Groundwater Utilization althrough Wells Pumps	27.10	30.90	42.00
Total (D)	538.62	317.74	640.00
E. Nutrient Management			
1. Indian Institute of Soil Science	245.98	133.89	250.00
2. Central Research Institute for Dryland Agriculture	87.95	149.83	120.00
3. AICRP—Dryland Agriculture	182.92	200.00	245.00
4. AICRP—Micro Nutrients	38.23	23.86	50.00
5. AICRP—Biological Nitrogen Fixation	37.13	28.05	30.00
6. AICRP—Micro Biological Decomposition	52.27	24.22	25.00
7. AICRP—Soil Test Crop Response	65.22	56.47	63.00
8. AICRP—Long-term Fertilizer Experiments	22.50	17.91	22.00
9. Network Land Use Planning		Scheme not approved	
Total (E)	732.20	634.23	805.00
Total (S.A.&AF.)	3354.22	2997.77	3009.00

1	2	3	4
IV. AGRICULTURAL ENGINEERING			
A. *Farm Implements & Machinery*			
1. Central Institute of Agricultural Engineering	170.00	160.10	180.00
2. AICRP—Power Tiller	27.48	23.88	38.50
3. AICRP—Farm Implements Machinery	68.73	61.55	100.00
4. AICRP—Human Engineering and safety studies	0.00	7.24	29.00
Total (A)	266.21	252.77	347.50
B. *Post Harvest Technology*			
1. Central Institute for Post Harvest Engg. & Technology	264.95	355.72	150.00
2. Central Institute for Research on Cotton Technology	97.00	89.24	110.00
3. Indian Lac Research Instt.	59.50	40.13	50.00
4. Jute Technological Research Laboratory	165.50	66.30	70.00
5. AICRP—Application of Plastics in Agriculture	12.50	25.68	20.50
6. AICRP—Jaggery & Khandasari	17.58	15.07	20.00
7. AICRP—Harvest & Post Harvest Technology	99.79	108.24	125.00
Total (B)	716.92	700.38	545.50
C. *Energy Management in Agriculture*			
1. AICRP—Renewable Energy Sources	62.20	64.55	70.00
2. AICRP—Energy Requirement in Agricultural Sector	33.37	46.21	55.00
3. AICRP—Animal Energy	21.55	31.73	40.00

1	2	3	4
4. NRC—Removal of Drudgry for farm women			
5. Network—Oilseed Processing	0.00		
6. Award of Innovation & Creativity			Management
Total (C)	117.12	142.49	165.00
D. Drainage Engineering			
1. AICRP—Agricultural Drainage	32.55	35.71	42.00
Total (Ag. Engg.)	1132.80	1131.35	1100.00
V. ANIMAL SCIENCE			
A. Animal Genetic Resources			
1. National Institute of Animal Genetics	91.50	Merged with NBAGR	
2. National Bureau of Animal Genetic Resources	44.96	212.39	175.00
3. Network—Animal Genetic Resources	2.75	59.72	33.00
Total (A)	139.21	272.11	208.00
B. Livestock Improvement			
1. National Dairy Research Institute	466.61	373.11	345.00
2. Central Sheep and Wool Research Institute	200.00	175.00	165.00
3. Central Avian Research Institute	83.33	105.19	100.00
4. Central Institute for Research on Goats	149.80	155.57	104.00
5. Central Institute for Research on Buffaloes	146.00	165.83	132.00
6. National Institute of Animal Nutrition & Physiology	0.00	29.50	75.00
7. N.R.C. on Biotechnology (Part of NDRI)	Functioning Under NDRI		
8. N.R.C.—Camal	89.98	70.00	75.00
9. N.R.C.—Yak	40.33	41.44	30.00

1		2	3	4
10.	N.R.C.—Mithun	29.70	14.93	25.00
11.	N.R.C.—Equine	100.04	44.00	75.00
12.	P.D.—Poultry	153.97	189.01	213.00
13.	P.D —Cattle	156.78	124.49	145.00
14.	AICRP—Sheep	29.30	29.59	36.00
15.	AICRP—Goat	22.32	21.87	26.00
16.	AICRP—Buffalo	59.18	55.58	104.00
17.	AICRP—Pig	39.07	42.98	52.00
18.	AICRP—Agricultural By-product	27.37	76.47	40.00
19.	Network—Micronutrients	8.48	37.82	50.00
20	Network—Embryo Transfer	27.25	45.54	60.00
21.	Network—Crop Based Animal Production System	0.24	7.29	35.00
	Total (B)	1831.75	1805.21	1887.00
C. Livestock Product Tech.				
1.	N.R.C.—Meat & Meat Product Technology	14.08	9.71	7.00
2.	R.D. Support of Process Upgradation of indigenous milk products for Industrial Application	0.00	10.00	30.00
	Total (C)	14.08	19.71	37.00
D. Animal Health				
1.	Indian Veterinary Research Institute	665.65	599.64	440.00
2.	AICRP—Disease Monitoring & Surveillance	12.52	38.03	41.00
3.	AICRP—Blood Protesta	9.45	0.68	17.00
4.	AICRP on Foot & Mouth Disease	48.71	52.04	70.00

1	2	3	4
5. Strengthening of Monitoring Mechanism and Training of Scientists & Technicians	Scheme not started		
6. N.R.C.—Biotechnology (Part of IVRI)	Included in IVRI		
7. Vaccine and Diagnostic Tech./ Livestock Farming System	Scheme not started		
Total (D)	736.33	690.39	568.00
Total (A.S.)	2721.37	2787.42	2700.00
VI. FISHERIES			
A. Capture Fisheries			
1. Central Marine Fisheries Research Institute	264.98	255.00	175.00
2. Central Inland Capture Fisheries Research Institute	83.28	120.00	140.00
Total (A)	348.26	375.00	315.00
B. Culture Fisheries			
1. Central Institute for Freshwater Aquaculture	204.98	159.95	150.00
2. Central Institute of Brackish water Aquaculture	94.72	146.97	175.00
3. N.R.C.—Cold Water Fisheries	21.99	50.98	35.00
4. ORP on Processing and Utilisation of Organic Waste for Aquaculture	4.01	8.75	25.00
Total (B)	325.70	366.65	385.00
C. Fish & Fish Processing Technology			
1. Central Institute of	150.01	154.62	140.00

1	2	3	4
D. Fish Genetic Resources			
1. National Bureau of Fish Genetic Resources	69.80	401.38	260.00
E. Fisheries Education			
1. Central Institute of Fisheries Education	58.18	138.92	250.00
Total (FY.)	951.95	1436.57	1350.00
VII. AGRIL. STATISTICS & ECONOMICS			
A. Indian agricultural Statistics Research Institute	80.63	110.22	70.00
B. N.R.C.—Agricultural Economics & Policy Research	28.97	49.86	30.00
Total (A.S.&E.)	109.60	160.08	100.00
VIII. AGRICULTURAL EXTENSION			
A. *Vocational Training with Integrated Function*			
1. Integrated Krishi Vigyan Kendras	3751.00	3901.89	3700.00
2. NRC for Women in Agriculture	0.00	0.00	100.00
Total (Ag. Ext.)	3751.00	3901.89	3800.00
IX. AGRICULTURAL EDUCATION			
A. *Strengthening of Agricultural Education*			
1. National Academy for Agricultural Research Management	122.97	162.82	200.00
2. Development & Strengthening of State Agril. Universities	1457.07	1624.39	1700.00
3. Development & Strengthening of Agricultural Education of Central Universities	27.00	29.80	50.00

1		2	3	4
4.	Strengthening PG Education in Deemed to be Universities	652.31	99.24	100.00
5.	Establishment of Central Agricultural University NEH Region	40.00	300.00	350.00
6.	Establishment of Centres of Advance Studies in SAUs and DUs.	209.03	312.11	342.50
7.	AICRP on Home Science	65.73	60.82	180.00
	Total (A)	2574.11	2589.18	2922.50
B.	*Recognising Professional Excellence*			
1.	Best Teacher Award	0.00	3.31	1.50
C.	*Professional Resources Utilization*			
1.	Utilization of Internal Competence	0.00	0.00	1.00
2.	Preparation of University Level books	0.00	0.66	2.00
3.	Emeritus Scientist Scheme	4.26	38.30	30.00
4.	Establishment of Monitoring & Exam. Cell	Included in Reorganisation of Education Division under AHRD		
5.	Establishment of Examination Cell	Scheme not started		
6.	Rural Awareness Work Experience Programme	Scheme not approved		
7.	Strengthening of PG Edn. in Food & Child Dev.			1.00
8.	Advance Centre on PG Edn. & Research			10.00
	Total (B & C)	4.26	42.27	45.50
	Total (Ag. Edn.)	2578.37	2631.45	2968.00
X.	WORLD BANK/FOREIGN AIDED PROJECTS			
A.	*World Bank Projects*			
1.	National Agricultural Research Project II	3625.21	2381.99	1935.00
2.	National Seed Project	Scheme transferred to DAC		
3.	Agril. Human Resource Development		73.05	1101.00
4.	Foreign Aided Project	509.53	614.95	3668.00
	Total	4134.74	3069.99	6704.00

1	2	3	4
XI. MANAGEMENT SERVICES			
A Bilateral Cooperation Projects			
1. Bilateral Cooperation Programme with Developing & Developed Countries (DARE) and Long-term Project under INDO-USSR, INDO-UK & INDO-USA Programme	6.15	36.04	18.42
Total (A)	6.15	36.04	40.00
B. Publication & Information	2.09	74.82	145.00
C. Strengthening of the Infrastructure			
1. Civil Works	30.21	415.00	610.00
a. ICAR Bhawan Phase II			
b. Guest House for ICAR Hqrs.			
c. National Agricultural Science Centre & Museum			
d. Residential Accommodation for ICAR Staff			
2. ICAR Agricultural Library	0.30	1.35	15.00
3. Strengthening of ASRB	4.41	7.29	21.00
4. Modernization of Office Space & Facilities	18.86	72.40	78.00
5. ICAR Headquarters	56.48	23.16	17.00
6. Publicity & Public Relations	0.00	0.00	35.00
Total (B+C)	112.35	594.02	921.00
D. *Support to professional societies/associations support to National academy*	56.50	45.00	70.00
E. IX Plan Working Group			4.00
Total (MIS)	175.00	675.06	1009.42
Grand Total	27629.94	27279.05	31054.42

Statement III

Details of Achievements and the Impact of these Research Works on Agricultural Production

Hybrid Rice—A Breakthrough:

India has become the second country after China to indigenously develop commercially viable rice hybrids having 1—1.50 tonne/hectare yield higher than the existing improved rice varieties. Last year, the area covered under seven hybrids released for cultivation in various states was around 60,000 hectares.

Rice—An Export Earner:

India has become a major rice exporting nation in the World, in the last few years. Release of dwarf varieties including Pusa Basmati-1 helped farmers in improving their yields significantly. Export of 5.0 million tonnes of non-basmati and 0.5 million tonne of basmati rice, an all time record was achieved in 1995-96.

Wheat—Consolidating the Gains:

New disease resistant high yielding varieties of wheat of North-Western belt—WH542, PBW343, UP2338 are bringing new hopes by replacing the earlier varieties like HD2329 which had become susceptible to rust disease. Improved varieties of Durum wheat having high export potential and suitable for samolina based products have been developed and popularised. A high yielding variety of Khapli wheat DDK1001 suitable for making South Indian dishes like Upma was released for Karnataka and Maharashtra.

Oilseed Revolution:

Development of hybrids in sunflower and castor and improved varieties in soybean and rapeseed-mustard, supported by better management practices and market have helped in doubling the country's oilseed production during the last one decade. Development of India's first Brassica hybrid "PGSH1" for Punjab having 20% higher yield is important.

Sustaining the Sugarcane Revolution:

To sustain the yield gains and to improve sugar recovery, new early maturing high sugar varieties for the Northern India have been evolved. Micro-propagation technique for rapid-seed multiplication is also a significant development in this regard.

Early Maturing Hybrids in Cotton:

India is one and only country in the World to commercially exploit hybrid vigour in cotton. Release of early maturing hybrid Fateh for Punjab, Dhanlakshmi for Haryana and Maru Vikas for Rajasthan having 30 to 40% higher yield and superior staple quality, has been yet another break-through. To cash in on the growing preference for naturally dyed products world over, research on colour cotton is in advanced stage.

Fruit Production—New Dimensions:

Research accomplishments including release of regular bearing hybrids of Mango, Papaya, Citrus, Ber, Pomegranate and high yielding superior quality grapes have made the country World's largest producer of fruits. Standardisation of softwood grafting in Mango, Cashew and Sapota has resulted in large scale multiplication of planting material. Adoption of tissue culture and drip irrigation technology in Banana has led to marked improvements in productivity.

Vegetables for Nutritional Security:

Development of large number of hybrids with tremendous yield potential and early harvestibility and standardisation of production technologies under varied agro-climatic conditions have ushered in a revolution in vegetable production. Vegetable research has paid good dividends in following areas:

- Radish and Tomato can be grown throughout the year.
- Two crops of Onion in a year has become possible in Northern India with the development of technology for Kharif Onion.
- Cauliflower is now grown in non-traditional areas viz., Kerala, Tamil Nadu and Karnataka states with the development of 'Pusa Early Synthetic' variety.

TPS Technology in Potato—A Milestone:

Development of True Potato Seed in (TPS) technology in potato, thereby reducing the cost of potato cultivation, is a significant achievement. India is presently the largest producer of TPS. This technology has greater relevance for potato production in hilly regions, especially in the North-East.

Floriculture—Tremendous Export Potential:

Development of large number of hybrids and strengthening of green house technology has given a

boost to our floriculture industry and export of cut flowers.

Pearl-Culture—Glittering Possibilities:

With the research support of ICAR Institutes both freshwater and marine pearl culture have been taken up on commercial scale. Efforts are afoot for technology upgradation for development of pearl images and coloured pearls.

Cifaca—Quality Fish Feed:

Developed by ICAR Institute CIFA, the new fish feed provides:

- High fish production, quality fish flesh, efficient feed conversion, good palatability and water stability.

Surgical Sutures from Fish-Gut as Import Substitute:

From guts of carps medically proven and acceptable surgical sutures developed and technology for commercial production.

Embryo Transfer Technology (ETT):

It is being used as a critical tool for improving productivity in cattle, buffalo, sheep and goat. Through superovulation and ETT, 50-60 calves can be produced from a bovine female in life time.

More Wool-Better Wool:

New productive strains of sheep have been evolved and are being used for further improving sheep breeds for carpet and apparel wool.

Crossbreeding in Cattle:

A high yielding cattle strain 'Frieswal' has been evolved with the milk yield of around 3000 litres in first lactation and 4000 litres in mature lactation. The Frieswal programme is being geared to meet the total requirement of high quality semen in the country. A record production of over 68 million tonnes of milk was reached.

Value Addition for Higher Earnings:

- Lac is being used for making dyes and high class perfumes.
- Process for making liquid jaggery and jaggery powder standardised.
- Spray dried instant banana-milk powder developed.

Farm and Post Harvest Mechanisation:

- Animal drawn drill plough.
- High capacity multicrop thresher.
- Improved kinnow harvester and portable kinnow grader.
- Mini dal mill.
- Bullock drawn groundnut planter.
- Zero tillage seed drill for planting wheat after rice.
- Rice transplanter.
- Sugarcane harvest.

Soil and Groundwater Mapping:

To promote better land resource management, soil maps for all the states have been prepared using ground surveys and remotely sensed data. To enhance the user-reach, digitalisation of these maps is in progress. A groundwater quality map was published for development of groundwater resources.

Proper Use of Pesticides Spraying Equipments by Farmers

996. SHRI SATYA DEO SINGH :
SHRI SHYAM LAL BANSHIWAL :
SHRI VIJAY PATEL :
SHRI CHHATAR SINGH DARBAR :

Will the Minister of AGRICULTURE be pleased to state:

(a) whether the Government are aware that the large remnants of pesticides remain left on the crop it shows that the pesticides are not being used properly as a result water gets polluted and infected the foodgrains which are being supplied to the general public causing health hazards;

(b) if so, the reasons therefor;

(c) whether the Government propose to specify the standard of spraying equipments and to educate the farmers about the proper use of pesticides in the agriculture sector;